

Book Chapters

M. M. Hamasha, T. Dhakal, K. Alzoubi, and **C. R. Westgate**, "Reliability of Indium Tin Oxide: Properties under Mechanical and Thermal Loads," *Indium: Properties, Technological Applications and Health Issues*, published by Nova Science Publishers, Inc., ISBN 978-1-6225-7696-8, December 20, 2012.

Conference Publications

A. Carpenter, "Enhancing Effective Throughput for Transmission Line-Based Bus," *the 39th International Symposium on Computer Architecture (ISCA 2012)*, Portland, Oregon, USA, June 11, 2012.

B. Kerrigan and **Y. Chen**, "A Study of Entropy Sources in Cloud Computers: Random Number Generation on Cloud Hosts," *the 6th International Conference on Mathematical Methods, Models, and Architecture for Computer Network Security (MMM-ACNS-2012)*, St. Petersburg, Russia, October 17-20, 2012.

R. I. Ledesma Goyzueta and **Y. Chen**, "A Deterministic Loss Model-based Analysis of CUBIC," *International Conference on Computing, Networking and Communications, Communication QoS and System Modeling Symposium (ICNC'13 - CQSM)*, San Diego, CA, USA, January 28-31, 2013.

X. Wang, Q. Gui, B. Liu, **Y. Chen**, and **Z. Jin**, "Leveraging Mobile Cloud for Telemedicine: A Performance Study in Medical Monitoring," *the 39th Annual Northeast Bioengineering Conference*, Syracuse, NY, USA, April 5-7, 2013.

H. Chen, **Y. Chen**, **D. Summerville**, and Z. Su, "An Optimized Design of Reconfigurable PSD Accelerator for Online Shrew DDoS Attacks Detection," *the 32nd IEEE International Conference on Computer Communications (INFOCOM 2013)*, Turin, Italy, April 14-19, 2013.

B. Liu, **Y. Chen**, D. Shen, G. Chen, K. Pham, and E. Blasch, "A Cloud-based Space Situational Awareness: Initial Design and Evaluation," *2013 SPIE Defense, Security, and Sensing (DSS)*, Baltimore, Maryland, USA, April 29 – May 3, 2013.

A. Fraiwan, S. Sundermier, D. Han, A. Steckle, D. Hassett, and **S. Choi** “Challenges in Development and Operation of MEMS Microbial Fuel Cells,” *Power MEMS 2012*, pp. 383-386, Atlanta, USA, December 2-5, 2012.

A. Fraiwan, S. Mukherjee, S. Sundermier, and **S. Choi**, “A Microfabricated Paper-based Microbial Fuel Cell,” *IEEE International Conference on Micro-Electro-Mechanical-Systems (MEMS)*, pp.809-812, Taipei, Taiwan, January 20-24, 2013.

M. Pourhomayoun and **M. L. Fowler**, “Sensor Network Distributed Computation for Direct Position Determination,” *the 7th IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM2012)*, Stevens Institute of Technology, Hoboken, New Jersey, USA, June 17-20, 2012.

M. Pourhomayoun, **M. L. Fowler**, and **Z. Jin**, “A Novel Method for Medical Implant In-Body Localization,” *the 34th IEEE International Conference of the Engineering in Medicine and Biology (EMBC2012)*, pp. 5757-5760, San Diego, California, USA, August 28 – September 1, 2012.

M. Pourhomayoun, **M.L. Fowler**, and **Z. Jin**, “A Novel Method for Tumor Localization and Tracking in Radiation Therapy,” *the 46th IEEE Asilomar Conference on Signals, Systems, and Computers*, pp. 1637-1640, Monterey, California, USA, November 2012.

M. Pourhomayoun and **M. L. Fowler**, “Cramer-Rao Lower Bound for Estimation of Phase in LBI-Based Localization Systems,” *IEEE Asilomar Conference on Signals, Systems, and Computers*, Monterey, California, USA, November 2012.

M. Pourhomayoun and **M. L. Fowler**, “Improving WLAN-Based Indoor Mobile Positioning Using Sparsity,” *IEEE Asilomar Conference on Signals, Systems, and Computers*, Monterey, California, USA, November 2012.

M. Pourhomayoun, **M.L. Fowler**, and **Z. Jin**, “Robustness Analysis of Sparsity-based Tumor Localization Under Tissue Configuration Uncertainty,” *IEEE Signal Processing in Medicine and Biology Symposium (SPMB12)*, pp. 1-5, City College of New York, New York, New York, USA, December 1, 2012.

V. Holub and **J. Fridrich**, “Designing Steganographic Distortion Using Directional Filters,” *Proc. IEEE WIFS*, Tenerife, Spain, December 2-5, 2012.

J. Fridrich, "Effect of Cover Quantization on Steganographic Fisher Information," *Proc. IEEE WIFS*, Tenerife, Spain, December 2-5, 2012.

J. Fridrich, "On the Role of Side-Information in Steganography in Empirical Covers," *SPIE Electronic Imaging, Media Watermarking, Security, and Forensics XV*, Vol. 8665, pp. 01 1-11, San Francisco, California, USA, February 3-7, 2013.

J. Kodovský and **J. Fridrich**, "Quantitative Steganalysis Using Rich Models," *Proc. SPIE, Electronic Imaging, Media Watermarking, Security, and Forensics XV*, Vol. 8665, pp. 00 1-11, San Francisco, California, USA, February 3-7, 2013.

V. Holub, **J. Fridrich**, and T. Denemark, "Random Projections of Residuals as an Alternative to Co-occurrences in Steganalysis," *Proc. SPIE, Electronic Imaging, Media Watermarking, Security, and Forensics XV*, Vol. 8665, pp. 0L 1-11, San Francisco, California, USA, February 3-7, 2013.

M. Goljan and **J. Fridrich**, "Sensor Fingerprint Digest for Fast Camera Identification from Geometrically Distorted Images," *SPIE Electronic Imaging, Media Watermarking, Security, and Forensics XV*, Vol. 8665, pp. 0B 1-10, San Francisco, California, USA, February 3-7, 2013.

J. Fridrich and J. Kodovský, "Multivariate Gaussian Model for Designing Additive Distortion for Steganography," *IEEE ICASSP*, Vancouver, Canada, May 26-31, 2013.

J. Fridrich and J. Kodovský, "Steganalysis in Resized Images," *IEEE ICASSP*, Vancouver, Canada, May 26-31, 2013.

H. Alemzadeh, C. Di Martino, **Z. Jin**, Z. T. Kalbarczyk, and R. K. Iyer, "Towards Resiliency in Embedded Medical Monitoring Devices," *Proc. Workshop on Open Resilient Human-aware Cyber-physical Systems (WORCS) in conjunction with 42nd IEEE/IFIP Int'l Conf. on Dependable Systems and Networks (DSN)*, pp. 1-6, June 2012.

M. Pourhomayoun, **Z. Jin**, and **M.L. Fowler**, "Spatial Sparsity Based Indoor Localization in Wireless Sensor Network for Assistive Healthcare Systems," *the 34th IEEE International Conference of the Engineering in Medicine and Biology (EMBC2012)*, pp. 3696-3699, San Diego, California, USA, August 28 - September 1, 2012.

R. I. Ledesma Goyzueta and **Z. Jin**, "Resiliency Analysis and Modeling for Real-Time Cardiovascular Diagnostic Devices," *Proc. IEEE Signal Processing in Medicine and Biology Symposium (SPMB)*, pp. 1-6, December 2012.

X. Li, J. Feldman, and W. Cadeau, "An OFDM-based Distributed Transmission Scheme for Uncoordinated Transmitters without Carrier Frequency and Timing Synchronization," *IEEE Military Communications Conference (MILCOM'2012)*, Orlando, Florida, USA, October 2012.

W. Cadeau and **X. Li**, "Jamming Probabilities and Throughput of Cognitive Radio Communications against a Wideband Jammer," *the 47th Annual Conference on Information Sciences and Systems (CISS'2013)*, Johns Hopkins University, Baltimore, Maryland, USA, March 20-23, 2013.

C. Xiong and **X. Li**, "Optimal Relay Selections in Two-way Amplify-and-forward Networks," *the 47th Annual Conference on Information Sciences and Systems (CISS'2013)*, Johns Hopkins University, Baltimore, Maryland, USA, March 20-23, 2013.

G. Abitova, **V. Nikulin**, **V. Skormin**, M. Beisenbi, and A. Ainagulova "Control System with High Robust Stability Characteristics Based on Catastrophe Function," *Proc. 17th IEEE Conf. on Engineering of Complex Computer Systems*, Paris, France, July 18-20, 2012.

V. Nikulin and **V. Skormin**, "Worldwide-Accessible 1.25Gbps Advanced Laser Communication Laboratory," *Proc. International Conference on Engineering Education*, Turku, Finland, July 30 – August 3, 2012.

B. Aitchanov, **V. Nikulin**, and O. Baimuratov, "Mathematical Modeling of Digital Pulse-Frequency Modulation Control Systems Developed for Objects with Transport Delay," *Proc. IEEE, CCDC*, Guiyang, China, May 25-27, 2013.

R. R. Thankalekshmi, S. Dixit, I.-T. Bae, D. Vanhart, and **A.C. Rastogi**, "Synthesis and Characterization of Cu-Doped ZnO Film in Nanowire like Morphology Using Low Temperature Self-Catalytic Vapor-Liquid-Solid (VLS) Method," *Materials Research Society Symposium Proc.*, doi: 10.1557/opl.2012.1696, 1494, 2012.

A. Dolgikh, T. Nykodym, **V. Skormin**, and Z. Birnbaum, "Using Behavioral Modeling and Customized Normalcy Profiles As Protection Against Targeted Cyber-Attacks," *Proceedings of MMM-ACNS*, St. Petersburg, Russia, October 17, 2012

K. Pintong, **D. Summerville**, and K. Temkin, "Transitioning a Lab-based Course to an Online Format: Strategies for Success," *the 119th ASEE Annual Conference & Exposition*, San Antonio, Texas, USA, June 10-13, 2012.

M. Kim, J. K. Park, and **C. M. Twigg**, "Rank Modulation Hardware for Flash Memories," *the 55th IEEE International Midwest Symposium on Circuits and Systems (IEEE MWSCAS 2012)*, pp. 294-297, August 2012.

N. E. Wu and Matthew Ruschmann, "Fault-tolerant Control of Power Grids for Security and Availability," *Proceedings American Control Conference*, Montreal, Canada, June 27-29, 2012.

M. Karnjanadecha and **S. A. Zahorian**, "Toward an Optimum Feature Set and HMM Model Parameters for Automatic Phonetic Alignment of Spontaneous Speech," *Proc. Interspeech 2012*, September 1, 2012.

J. Wu, **S. A. Zahorian**, and H. Hu, "Tone Recognition for Continuous Accented Mandarin Chinese," *ICASSP 2013*, pp. 7180- 7183, May 28, 2013.

Journal Articles

J. Feng and **Y. Chen**, "A Fair Non-Repudiation Framework for Data Integrity in Cloud Storage Services," *International Journal of Cloud Computing*, Vol. 2, No. 1, 2013.

H. Chen, T. Gaska, **Y. Chen**, and **D. Summerville**, "An Optimal Reconfigurable Power Spectral Density Converter for Real-Time Shrew DDoS Attacks Detection," *Computers and Electrical Engineering*, Elsevier, Vol. 39, No. 2, February 2013.

S. Mukherjee, S. Su, W. Panmanee, R.T. Irvin, D. Hassett, and **S. Choi**, "A Microliter-scale Microbial Fuel Cell Array for Bacterial Electrogenic Screening," *Sensors and Actuators: A. Physical*, 10.1016/j.sna.2012.10.025, November 1, 2012.

A. Fraiwan, S. Sundermier, D. Han, A. Steckle, D.J. Hassett, and **S. Choi**, "Enhanced Performance of MEMS Microbial Fuel Cells Using Electrospun Microfibrous Anode and Optimizing Operation," *Fuel Cells*, 10.1002/fuce.201200225, Vol. 13, pp. 336-341, April 30, 2013.

S. Chen, Y. Wang, and **S. Choi**, "Applications and Technology of Electronic Nose for Clinical Diagnosis," *Open Journal of Applied Biosensor*, Review Article, Vol. 2, pp. 39-50, May 1, 2013.

J. Kodovský, **J. Fridrich**, and V. Holub, "Ensemble Classifiers for Steganalysis of Digital Media," *IEEE Trans. on Info. Forensics and Security* 7(2), pp. 432–444, 2012.

J. Fridrich and J. Kodovský, "Rich Models for Steganalysis of Digital Images," *IEEE Trans. on Info. Forensics and Security* 7(3), pp. 868–882, June 2012.

J. Fridrich, "Effect of Cover Quantization on Steganographic Fisher Information," *IEEE Trans. on Info. Forensics and Security* 8(2), pp. 361–373, February 2013.

R. Dixit, L. Shen, M. Ratterman, L. Papautsky, and **D. Klotzkin**, "Simultaneous Single Detector Measurement of Multiple Fluorescent Sources," *IEEE Sensors Journal*, doi:10.1109/JSEN.2013.2239285, Vol. 13, pp. 1965-7, February 1, 2013.

X. Li, "Optimal Multiple-relay Selection in Dual-hop Amplify-and-Forward Cooperative Networks," *Electronic Letters*, Vol. 48, No. 12, pp. 694-695, June 7, 2012.

X. Li, C. Xiong and J. K. Lee, "Optimal Set of Multiple Relays and Distributed Self-selection in Cooperative Networks," *Communications and Networks*, May 2013.

B. Aitchanov, **V. Nikulin**, O. Baimuratov, and Z. Aitzhanova, "Computationally Efficient Control System Based on Digital Dynamic Pulse Frequency Modulation for Microprocessor Implementation," *Int'l Journal of Computer Science Issues*, Vol. 10, No. 3, pp. 120-124, May 2013.

G. P. Pandey and **A. C. Rastogi**, "Solid-State Supercapacitors based on Pulse Polymerized Poly(3,4-ethylenedioxythiophene) Electrodes and Ionic Liquid Gel Polymer Electrolyte," *Journal Electrochemical Society*, Vol. 159, No. 10, pp. A1664-A1671, August 29, 2012.

R. R. Thankalekshmi and **A.C. Rastogi**, "Structure and Optical Band Gap of $ZnO_{1-x}S_x$ Thin Films Synthesized by Chemical Spray Pyrolysis for Application in Solar Cells," *Journal of Applied Physics*, doi: 10.1063/1.4754014, Vol. 112, No. 063708, September 15, 2012.

G. P. Pandey and **A. C. Rastogi**, "Synthesis and Characterization of Pulsed Polymerized Poly(3,4-ethylenedioxythiophene) Electrodes for High-Performance Electrochemical Capacitors," *Electrochemical Acta*, Vol. 87, pp. 158-168, January 1, 2013.

T. Dhakal, L. K. Ganta, D. Ferizovic, S. Rajendran, D. Vanhart, M. Seymour, and **C. R. Westgate**, "CdTe Solar Cell from Sputtering Method," *MRS Spring Proceedings*, Vol. 1447, 2012.

Y. Gao, S. Adusumilli, J. Turner, L. Lesperance, **C. R. Westgate**, and B. Sammakia, "Factors Affecting the Growth of Carbon Nanofibers on Titanium Substrates and their Electrical Properties," *Journal of Nanoscience and Nanotechnology*, Vol. 12, 1-11, 2012.

L. K. Ganta, T. Dhakal, S. Rajendran, and **C. R. Westgate**, "Synthesis of FeS₂ Nano Crystals for Ink-Based Solar Cells," *MRS Spring Proceedings*, Vol. 1447, 2012.

M. M. Hamasha, T. Dhakal, K. Alzoubi, S. Albahri, A. Qasaimeh, S. Lu, and **C. R. Westgate**, "Stability of ITO Thin Film on Flexible Substrate under Thermal Aging and Thermal Cycling Conditions," *IEEE Journal of Display Technology*, Vol. 8, No. 7, pp. 383-388, July 2012.

Y. Gao, G. P. Pandey, J. Turner, **C. R. Westgate**, and B. Sammakia, "Effects of the Catalyst and Substrate Thickness on the Carbon Nanotubes/Nanofibers as Supercapacitor Electrodes," *Physica Scripta*, Vol. 86, No. 065603, August 2012.

M. M. Hamasha, K. Alzoubi, J. C. Switzer III, S. Lu, M. Poliks, and **C. R. Westgate**, "Reliability of Sputtered Aluminum Thin Film on Flexible Substrate under Cyclic Bending Fatigue Conditions," *IEEE Transaction on Components, Packaging and Manufacturing Technology*, Vol. 2, No. 12, pp. 2007-2016, December 2012.

M. M. Hamasha, T. Dhakal, P. Vasekar, K. Alzoubi, S. Lu, D. Vanhart, and **C. R. Westgate**, "Reliability of Sputtered Deposited Aluminum-Doped Zinc Oxide under Harsh Environmental Conditions," *Journal of Solar Energy*, Vol. 89, pp. 54-61, March 2013.

J. Huang and **N. E. Wu**, "Fault-tolerant Placement of Phasor Measurement Units Based on Control Reconfigurability," *Control Engineering Practice*, Vol. 21, pp. 1-11, 2013.

Presentations

Y. Chen, "In Introduction to Moving-Target Defense for Cloud Systems," CoCo Seminar Series, Binghamton University, Binghamton, New York, USA, November 7, 2012.

S. Choi, "BioMEMS Devices and Packaging," *IEEC TAB Meeting*, Binghamton University, Binghamton, New York, USA, October 2, 2012.

S. Sundermier, A. Fraiwan, and **S. Choi**, "Laminar Flow-based Microbial Fuel Cells," *Advances in Microfluidics & Nanofluidics*, South Bend, Indiana, USA, May 24-26, 2013.

D. Han, **S. Choi**, D. Hassett, and A. Steckle, "Porous Electrospun Nanofiber Membrane Electrode for Enhancing Power Density of Micro-sized MFC," *Advances in Microfluidics & Nanofluidics*, South Bend, Indiana, USA, May 24-26, 2013.

J. Fridrich, "Effect of Cover Quantization on Steganographic Fisher Information," *Proc. IEEE WIFS*, Tenerife, Spain, December 5, 2012.

J. Fridrich, "Who is Winning? Steganography and Steganalysis in Digital Media," *SPIE Electronic Imaging*, San Francisco, California, USA, February 6, 2013.

D. Klotzkin, "Implementation of a Multidisciplinary Introduction to Microfabrication at Binghamton University," *Frontiers in Education*, Seattle, Washington, USA, October 3, 2012.

D. Klotzkin, "Implementation and Impact of Campus-wide Multidisciplinary Approach to Microfabrication," *Transforming Undergraduate Education in Science Conference (TUES'13)*, Washington, DC, USA, January 23, 2013.

G. P. Pandey and **A. C. Rastogi**, "Polyacrylonitrile and 1-Ethyl-3-methylimidazolium Thiocyanate-based Gel Polymer Electrolyte for Solid-State Supercapacitors with Graphene Electrodes," *Pacific Rim Meeting (PriME) Electrochemical Society*, Honolulu, Hawaii, USA, October 7-12, 2012.

G.P. Pandey and **A.C. Rastogi**, "Polyaniline-MnO₂ Nanocomposite Supercapacitor Electrodes Prepared by Galvanic Pulse Polymerization," *Pacific Rim Meeting (PriME) Electrochemical Society*, Honolulu, Hawaii, USA, October 7-12, 2012.

A. C. Rastogi, "Interfacial Polymer Ferroelectric Dipole Induced Electric Field Effect on the Photovoltaic Performance of Organic Solar Cells," *the 40th Conference on the Physics and Chemistry of Surfaces and Interfaces (40th PCSI)*, Waikoloa, Hawaii, USA, January 20-24, 2013.

R. R. Thankalekshmi and **A. C. Rastogi**, "Investigations on the Electronic and Structural Properties of CdS/CZTS Heterojunction Interface for Improving Solar Cell Efficiency and Stability," *the 40th Conference on the Physics and Chemistry of Surfaces and Interfaces (40th PCSI)*, Waikoloa, Hawaii, USA, January 20-24, 2013.

N. K. Sidhu and **A. C. Rastogi**, "Nanoscale Blended MnO₂ Nanoparticles in Electro-Polymerized Polypyrrole Conducting Polymer for Energy Storage in Supercapacitors," *Materials Research Society, Spring Meeting*, San Francisco, California, USA, April 1-5, 2013.

N. K. Sidhu, R. R. Thankalekshmi, and **A. C. Rastogi**, "Solution Processed TiO₂ Nanotubular Core with Polypyrrole Conducting Polymer Shell Structures for Supercapacitor Energy Storage Devices," *Materials Research Society, Spring Meeting*, San Francisco, California, USA, April 1-5, 2013.

H. Hu and **S. A. Zahorian**, "An Experimental Comparison of Fundamental Frequency Tracking Algorithms," *the 164th Meeting of the Acoustical Society of America*, 5aSC28, Vol. 132, No. 3, Pt. 2 of 2, pp. 2092, Kansas City, Missouri, USA, October 22-26, 2012.

S. A. Zahorian, "Parametric Forms of Spectral Amplitude Nonlinearities for Use in Automatic Speech Recognition," *the 164th Meeting of the Acoustical Society of America*, 4pSC18, Vol. 132, No. 3, Pt. 2 of 2, pp. 2079, Kansas City, Missouri, USA, October 22-26, 2012.

J. Wu, **S. A. Zahorian**, and H. Hu, "Tone Recognition in Continuous Mandarin Chinese," *the 164th Meeting of the Acoustical Society of America*, 2pSC14, Vol. 132, No. 3, Pt. 2 of 2, pp. 1968, Kansas City, Missouri, USA, October 22-26, 2012.

Please Note: All conference publications were also presented at respective conferences.